Vidyasagar University

Curriculum for B.Sc (General) in Zoology

[Choice Based Credit System]

Semester-I

Course	Course Code	Name of the Subjects	Course Type/ Nature	Teaching Scheme in hour per week			Credit	Marks
				L	T	P		
CC1 [DSC-1A]		**C1T:**Animal Diversity	Core Course-1	4	0	0	6	75
		C1P: Animal Diversity		0	0	4		
CC2 [DSC-2A]	TBD	**DSC-2A (other Discipline)**	Core Course-2				6	75
CC3 [DSC-3A]	TBD	**DSC-3A (other Discipline)**	Core Course-3				6	75
AECC		English	AECC (Elective)	1	1	0	2	50
Semester Total							**20**	**275**

L=Lecture, **T**=Tutorial, **P**=Practical, **CC =** Core Course, **TBD =** To be decided, **AECC=** Ability Enhancement Compulsory Course

DSC-1 = Discipline Specific Core of Subject-1, **DSC-2** = Discipline Specific Core of Subject-2,**DSC-3** = Discipline Specific Core of Subject-3.

Semester-I
Core Course (CC)

CC-1 : Animal Diversity — Credits 06

C1T: Animal Diversity — Credits 04

Unit 1: Kingdom Protista
General characters and classification up to classes; Locomotory Organelles and locomotion in Protozoa

Unit 2: Phylum Porifera
General characters and classification up to classes; Canal System in *Sycon*

Unit 3: Phylum Cnidaria
General characters and classification up to classes; Polymorphism in Hydrozoa

Unit 4: Phylum Platyhelminthes
General characters and classification up to classes; Life history of *Taenia solium*

Unit 5: Phylum Nemathelminthes
General characters and classification up to classes; Life history of *Ascaris lumbricoides* and its parasitic adaptations

Unit 6: Phylum Annelida
General characters and classification up to classes; Metamerism in Annelida

Unit 7: Phylum Arthropoda
General characters and classification up to classes; Vision in Arthropoda, Metamorphosis in Insects

Unit 8: Phylum Mollusca
General characters and classification up to classes; Torsion in gastropods

Unit 9: Phylum Echinodermata
General characters and classification up to classes; Water-vascular system in Asteroidea

Unit 10: Protochordates
General features and Phylogeny of Protochordata

Unit 11: Agnatha
General features of Agnatha and classification of cyclostomes up to classes

Unit 12: Pisces
General features and Classification up to orders; Osmoregulation in Fishes

Unit 13: Amphibia
General features and Classification up to orders; Parental care

Unit 14: Reptiles
General features and Classification up to orders; Poisonous and non-poisonous snakes, Biting mechanism in snakes

Unit 15: Aves
General features and Classification up to orders; Flight adaptations in birds

Unit 17: Mammals
Classification up to orders; Origin of mammals

Note: Classification of Unit 1-9 to be followed from "Barnes, R.D. (1982). *Invertebrate Zoology*, V Edition"

C1P: Animal Diversity (Practical) **Credits 02**

1. Study of the following specimens:

Amoeba, Euglena, Plasmodium, Paramecium, Sycon, Hyalonema, and *Euplectella, Obelia, Physalia, Aurelia, Tubipora, Metridium, Taenia solium,* Male and female *Ascaris lumbricoides, Aphrodite, Nereis, Pheretima, Hirudinaria, Palaemon, Cancer, Limulus, Palamnaeus, Scolopendra, Julus, Periplaneta, Apis, Chiton, Dentalium, Pila, Unio, Loligo, Sepia, Octopus, Pentaceros, Ophiura, Echinus, Cucumaria* and *Antedon, Balanoglossus, Herdmania, Branchiostoma, Petromyzon, Sphyrna, Pristis, Torpedo, Labeo, Exocoetus, Anguilla, Ichthyophis/Ureotyphlus, Salamandra, Bufo, Hyla, Chelone, Hemidactylus, Chamaeleon, Draco, Vipera, Naja, Crocodylus, Gavialis,* Any six common birds from different orders, *Sorex*, Bat, *Funambulus, Loris*

2. Study of the following permanent slides:

T.S. and L.S. of *Sycon*, Study of life history stages of *Taenia,* T.S. of male and female *Ascaris*

3. Key for identification of poisonous and non-poisonous snakes

An "animal album" containing photographs, cut outs, with appropriate write up about the above mentioned taxa. Different taxa/ topics may be given to different sets of students for this purpose.

Suggested Readings:

1. Ruppert and Barnes, R.D. (2006). *Invertebrate Zoology*, VIII Edition. Holt Saunders International Edition.
2. Barnes, R.S.K., Calow, P., Olive, P.J.W., Golding, D.W. and Spicer, J.I. (2002). *The Invertebrates: A New Synthesis*, III Edition, Blackwell Science
3. Young, J. Z. (2004). *The Life of Vertebrates*. III Edition. Oxford university press.
4. Pough H. *Vertebrate life*, VIII Edition, Pearson International.
5. Hall B.K. and Hallgrimsson B. (2008). *Strickberger's Evolution*. IV Edition. Jones and Bartlett Publishers Inc.